



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,277	10/21/2004	Hiromu Ueshima	100341-00054	6411
4372	7590	04/16/2008	EXAMINER	
ARENT FOX LLP 1050 CONNECTICUT AVENUE, N.W. SUITE 400 WASHINGTON, DC 20036			HOEL, MATTHEW D	
			ART UNIT	PAPER NUMBER
			3714	
			NOTIFICATION DATE	DELIVERY MODE
			04/16/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com
IPMatters@arentfox.com
Patent_Mail@arentfox.com

Office Action Summary	Application No.	Applicant(s)	
	10/511,277	UESHIMA, HIROMU	
	Examiner	Art Unit	
	Matthew D. Hoel	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 01/30/2008.
- 2a) This action is **FINAL**.
- 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 and 6-9 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1 and 6-9 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ___ is/are: a) accepted or b) objected to by the Examiner.
 - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____.
 - 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Togami (U.S. patent 6,394,897 B1) in view of Tosaki, et al. (U.S. patent 6,312,335 B1) and Saikawa, et al. (U.S. patent 6,746,331 B1).

4. As to Claim 1: '897 outlines all of the limitations of Claim 1, but lacks the claimed input device, a judgment unit that determines that the current position is out of ball-strikable rang, and a second calculation unit for calculating an initial speed vector of the ball after there has been a swing. '897 teaches a game machine displaying a ball on a monitor screen through execution of a game program in which a CPU player controlled by a computer program plays against the player (Abst.; 11:59-63). '897 has a first

Art Unit: 3714

calculation circuit for calculating a predicted return position of the ball returned by the CPU player (Fig. 13, step 101; 12:43-58). '897 has a judgment circuit for judging whether a current position of the player is in a ball strikable range of the player (Fig. 13, determines whether the player is within "strikable" distance (as defined by the applicant by determining first which player character is the most suitable for intercepting the volleyball (S106) in relation to the volleyball's determined landing position (S102) and moving the player character to the volleyball's determined landing position (S110) if the player is greater than a successful receiving distance (S109) from the volleyball's determined landing position). '897 has a ball striking position movement circuit for automatically moving a ball striking position of the player to be approximated to the predicted return position in response to a negative judgment by the judgment circuit (Fig. 13, Claims 5 & 6). '335, however, discusses a game system including a game machine and an input device under which a player plays a game using the input device, the input device comprising an acceleration sensor for generating an acceleration correlation signal when the player actually swings the input device in a real space (Abst.; 16:15-55; 17:36-43), and a transmission unit for transmitting the generated acceleration correlation signal to the game machine (Fig. 2a, 5:40-53). '335 also has a swing detection circuit for detecting whether the input device has actually been swung or not (16:35-48). One of ordinary skill in the art at the time the invention was made would have been motivated to apply the input device of '335 to the game of '897. Tennis as outlined in '335 and volleyball as outlined in '335 are analogous games in that each involves opposing individuals or teams volleying a ball back and forth over a net,

with the intent of keeping the volley going as long as possible. A player or team loses a round if he/she or they let the ball hit the floor on their side of the court or serve it out of bounds to the other player's side. '335 teaches the input device applied to the game of tennis as well as volleyball (17:35-43). The advantage of this combination is to provide a more realistic input for the game by using controllers, which imitate the player's actual motions in the sports games, as opposed to simply using the standard controllers outlined in '897 (Fig. 1). These standard controllers have the disadvantage of requiring players to memorize, which keys correspond to which actions, which is not always intuitive. Having the input device mimic the player's natural motions also makes the game easier to learn.

5. '331, however, teaches a judgment unit that determines that the current position is out of ball-strikable range (step 320, Fig. 5; 8:28-39), and a second calculation unit for calculating an initial speed vector of the ball after there has been a swing (6:53-62, 8:40-48; steps 328, 330, & 332, Fig. 5) in which the position of the ball exists in a ball-receivable range that is three-dimensionally defined (7:7-16, Fig. 3). The judgment unit of '331 applied to the accelerometers of '335 would create a second calculation unit for calculating an initial speed vector of the ball after receiving when the swing detection unit has detected a swing in which the position of the ball exists in a ball receivable range that is three-dimensionally defined, from a position of the ball and acceleration of the input device according to the acceleration correlation signal. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied the judgment unit, three-dimensional space, and speed vector calculation of

Art Unit: 3714

'331 to the combination of '897 and '335. '331 is meant to be applied to tennis (3:17) which is analogous art to '897 (volleyball) in that both games are sports in which a ball is volleyed over a net, so the plays of the games are very similar. '897 hints at, but does not explicitly disclose (Figs. 2 to 6, three-dimensional perspective), the three-dimensional space disclosed by '331. The three-dimensional space would have the advantage of making the calculations of speed and angle upon the hitting of the ball more accurate as all three dimensions are taken into account in the calculations, and the visual display would have been more realistic for the same reasons. The step 320 of Fig. 5 ('331) applied to step S109 of Fig. 13 ('897) would have the advantage of having the step S110 of Fig. 13 ('897) correct the player's position into the landing position of the volleyball, as players outside the ball-strikable range (within arm's length as applied to a volleyball game) of the volleyball's landing point, would make the game for less skilled players. Such a modification, for example, could be applied at a lower skill level of the volleyball video game for beginning players, and as players become more skilled, they could move up to a skill level where such a correction of player position is not used.

6. As to Claim 6: Claim 6 is rejected for the same reasons as Claim 1, except that the combination would have two or more players, each player, of course, with his or her own input device. '897 teaches a player vs. player mode (11:59-63) and two sets of controls (Fig. 1).

7. As to Claim 7: The controller of '335 has a switch (35a, Fig. 3). '335 moves the position from a forward position to a backward position or vice-versa based on the

Art Unit: 3714

controller's input (17:44 to 43, reflected in image). In the case of volleyball this would be the ball striking position (17:36-43).

8. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over '897, '335, and '331 in view of Cheng (U.S. patent 5,667,220 A).

9. As to Claims 8 and 9: The references cited above do not cite a digitally modulated infrared signal. One of ordinary skill in the art at the time of invention would have been motivated to apply the digitally modulated infrared signal of '220 (Fig. 6; 3:54-65) to the cited combination. This would have the advantage of eliminating the signal wire of '335 (Fig. 1) which would tend to get in the way of a player in an action game involving swinging the controller.

Response to Arguments

10. Applicant's arguments with respect to claims 1 and 6 to 9 have been considered but are moot in view of the new ground(s) of rejection. The new grounds of rejection reduce cumulative art and clarify the examiner's position. The action is non-final as it is an amendment the examiner could have reasonably anticipated from the applicant's remarks in the last interview. The Nomura reference was obviated by the amendment. The examiner respectfully disagrees with the applicant as to the claims' condition for allowance.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Harris in U.S. patent 4,545,576 A (4:32-63 and Fig. 2) defines a standard three-dimensional strike zone in baseball. "Rules of the Game," by the Diagram Group, St. Martin's Press, New York, NY, 1995, chapter on baseball, discloses a standard three-dimensional strike zone in baseball. "Outlaw Tennis" for the XBox on Page 7 discloses a computer-controlled tennis player controlled by artificial intelligence (downloaded from www.replacementdocs.com, Mar. 11th, 2008). "Beach Volleyball" for the PC on Page 11 discloses a computer-controlled volleyball player controlled by artificial intelligence (downloaded from www.replacementdocs.com, Mar. 10th, 2008). Okitsu, et al. in U.S. patent 6,394,894 B1 teach a strike zone. French, et al. in U.S. patent 6,308,565 B1 teach intercepting a ball. Iannozo, et al. in U.S. patent 5,882,204 A teach a virtual player intercepting a ball in virtual three-dimensional space. Okamura, et al. in U.S. patent 7,059,963 B2 teach players intercepting a ball. Rimoto in U.S. patent 6,257,983 B1 teaches a strike zone.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Hoel whose telephone number is (571)272-5961. The examiner can normally be reached on Mon. to Fri., 8:00 A.M. to 4:30 P.M.

13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert E. Pezzuto can be reached on (571) 272-6996. The fax phone

Art Unit: 3714

number for the organization where this application or proceeding is assigned is 571-273-8300.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Matthew D. Hoel
Patent Examiner
AU 3714

/Robert E. Pezzuto/
Supervisory Patent Examiner
Art Unit 3714

/M. D. H./
Examiner, Art Unit 3714